

BOOK REVIEWS

Radiobiology of Plutonium. Edited by Betsy J. Stover and Webster S. S. Jee
The J. W. Press, University of Utah, Salt Lake City, 1972. 537 pp. \$17.50.

In 1973, with the increasing involvement of the European Community in the controversies related to the adoption or development of a nuclear energy programme, it is worthwhile looking at the facets of evolved and experimental data which have accrued over the past 20 years, collated in 1969, and published in 1972.

The contemporary relevant factors which this volume points out are the need to quantitate the quality and prevalence of damage in the light of contemporary estimates and to emphasise the essential length of time needed if these are to be correlated with studies on population exposures, in order to derive an estimate of relevant damage in the current context.

Although this volume predominantly reports progress studies of beagles with incorporated ^{239}Pu , looking at the probably irrelevant route of subcutaneous incorporation, as well as the important inhalation routes for incorporation, other important variables, both interspecies, as well as those of age, sex, or chelating agents, are also reported.

In moving towards mechanistic studies, the cellular deposition and retention of ^{239}Pu has been related to malignant neoplasms. Relative toxicity is compared mostly with Americium—about which much is unknown.

The striking feature of this volume is, however, the confirmation that ultimately, radiobiological effects must be tested in man. In the early, historical, chapter, on the use of 'terminal patients', from 1944-47, to assess plutonium toxicity, there are signposts indicating the waste of human data, from a then expensive, and possibly unacceptably hazardous, procedure to the patient. In this early chapter, several cogent references are 'secret', 'restricted', or available in an internal laboratory report. With hindsight, the ethical choice of some subjects, and the high percentage of loss of material, with no *post mortem* examination is a striking warning. These

human data, however piecemeal they may have seemed, are essential to the radiological protection and medical scientific community, if we are not to over- or under-estimate the hazards from environmental plutonium levels, to which we will be exposed during the increasing development of all facets of the nuclear power programme.

A noteworthy feature of the volume is the setting up of the US Transuranium Registry. This is not a post-damaged retrospective survey, but an approach to preventive and quantitative radionuclide toxicity which any community embarking on a nuclear energy programme could well emulate.

PATRICIA J. LINDOP

The Law relating to Pollution. By J. McLoughlin. Studies in environmental pollution. 1972. Manchester University Press, 133 pp. £1.44.

This is the first of a series of monographs planned by the Pollution Research Unit at the University of Manchester. It assembles the existing legislation in Britain which concerns all forms of pollution of the environment. After a brief introduction, which defines the pollution problem and explains the differences between Common and Statute law, the author deals in turn with inland waters, sea fisheries, air pollution, nuclear energy, noise, oil pollution at sea and solid waste. In each case he considers the rights, duties and liabilities of individuals, industries or local authorities as they are affected by judicial precedents and by fifty separate Acts enacted between 1847 and 1971. Schemes of voluntary restraint, as in the use of pesticides, are also outlined, with comments on the advantages and limitations of such arrangements.

The book is written in a clear and succinct way with a minimum of technical language and provides a useful contribution to an important subject. This is a rapidly-moving field, however, and already, with the international convention in 1972 on the dumping of toxic wastes at sea, the preparation of the Water Bill which proposes Regional Water Authorities with wide powers, and with recent proposals for new legislation on waste disposal, one can envisage the need for a second edition in a few years' time.

B. N. K. DAVIS

Pollution in the Air. Problems, Policies and Priorities. By R. S. Scorer. Routledge & Kegan Paul, London and Boston. 1973. viii + 148 pp. £2.75.

The first thing to note about this book is its title. 'Pollution in the Air' is to be taken figuratively rather than literally. The author covers a wide spectrum of

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